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NORTH FRUITA DESERT MANAGEMENT PLAN

**U.S. Department of the Interior
Bureau of Land Management
Grand Junction Field Office**

September 2003

SUMMARY

The 72,656 acres of public land in the North Fruita Desert Area were identified as part of the Grand Valley Intensive Recreation Management Area (IRMA) in the Grand Junction Field Office Resource Management Plan (RMP) in 1987. This RMP recommended additional planning in the area, more active supervision of recreational uses, designation of one "Open" area for Off-Highway Vehicle (OHV) use and provided for enhanced resource protection. The area's close proximity to Grand Junction and Fruita makes the North Fruita Desert increasingly valuable for dispersed recreational opportunities. This area is commonly used by residents of Mesa County but is experiencing increased visitation from throughout the region and out-of-state as well, as regional recreational opportunities are increasingly publicized.

Recreational opportunities present in the area include OHV use, vehicle driving for pleasure, mountain biking, horseback riding, camping, hiking, hunting, shooting, and viewing scenery and natural features. OHVs are limited, as stated in the RMP, to existing roads and trails.

Undesired outcomes from recreational visitation include rapidly spreading primitive camping, vehicle parking in new and inappropriate locations, driving cross-country, litter, conflicts with other land uses, and visitor safety issues. The goal of the management direction presented in this plan is to afford protection to the resources present in the North Fruita Desert area while still allowing for a variety of recreational and commercial opportunities.

Representatives from various user groups and concerned parties with an interest in and knowledge about the area formed the North Fruita Desert (NFD) Citizen Ad-Hoc Committee in August 2000 in order to participate in planning for the future management of the North Fruita Desert planning area. The Ad-Hoc Committee was sanctioned by the Northwest Resource Advisory Council (RAC) and operates under the RAC's charter. This group consisted of representatives of the Colorado Environmental Coalition, Sierra Club, Colorado Plateau Mountain Bike Trail Association, Mesa County Cycling Association, Grand Valley Mountain Bike Patrol, Grand Mesa Jeep Club, Motorcycle Trail Riding Association, Bookcliff Rattlers Motorcycle Club, Western Slope ATV Association, city of Fruita, Colorado State Parks, landowners, grazing permittees, other users such as horseback riders and shooters, and representatives from BLM's Northwest RAC. Fourteen meetings with either the Ad-Hoc Committee or a Trails Subcommittee were held, as well as one field trip taken between August 2000 and December 2002. The Bureau of Land Management (BLM) coordinated with the North Fruita Desert Citizens Ad-Hoc

Committee during this time to formulate a vision statement, goals and objectives, and management recommendations for the area. The recommended management actions in this plan were formulated in an attempt to direct public use to appropriate areas and define the lands and transportation routes being utilized by visitors.

The following Management Plan contains the management goals, objectives and management direction and actions agreed upon by the BLM, and the NFD Citizens Ad-Hoc Committee.

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I. INTRODUCTION

A. PURPOSE

Recreation resource management decisions for the Grand Junction Field Office (GJFO) were detailed in the GJFO Resource Management Plan (RMP) in 1987. The Grand Valley, including the North Fruita Desert, was designated as an Intensive Recreation Management Area (IRMA). The RMP recommended the need for additional planning for the IRMA because of its distinguishing characteristics and significance to recreation. The North Fruita Desert management plan fulfills the obligation of the GJFO to complete a site-specific plan for this area. It establishes management objectives and identifies management strategies to achieve those objectives. The North Fruita Desert Management Plan is consistent with the GJFO RMP and BLM management policies and is an integrated, issue-driven plan in that it addresses all major resource disciplines present in the area and the issues associated with them. It is also consistent with direction for recreation actions encapsulated in Recreation Guidelines to Meet Public Land Health Standards on Bureau of Land Management (BLM) Managed Lands in Colorado (2000).

B. LOCATION

The North Fruita Desert planning area is located in Mesa County, Colorado, 5 miles north of the city of Fruita. The area is bounded by East Salt Creek on the west, 21 Road on the East, Coal Gulch Road on the North, and the BLM/ private land boundary on the south.

C. NATURAL SETTING

The North Fruita Desert Area encompasses a 13-mile portion of the Bookcliffs, as well as several major drainages (Big and East Salt Washes) flowing out of the Bookcliffs across the desert and into the Colorado River. The soils of the project area are developing primarily in Mancos Shale bedrock and alluvium. Nearer the Bookcliffs, alluvium washing from the shales and sandstones of the steep Mesa Verde Formation cliffs above have a pronounced influence, and soils have sandier textures, with stone and cobble present. The erosion potential for soils in both the Grand Valley and Bookcliffs areas is high.

The North Fruita Desert Area receives approximately 10 inches of precipitation annually. Precipitation peaks in the spring (April-May) and in the late summer (August-September). Temperature extremes range from over 100 degrees Fahrenheit in summer to a very rare -20 degrees Fahrenheit during the winter months.

D. BACKGROUND

Access: The project area's close proximity to the urban population of Grand Junction and Fruita has made it increasingly valuable for dispersed recreation. Public lands within the planning area are accessed by Colorado Highway 139 and Mesa County Roads 16, 18, and 21. As specified in the 1987 Resource Management Plan for the Grand Junction Field Office, motorized vehicles are permitted only on existing roads and trails, except for one OHV open area, a 400-acre parcel on the east side of 18 Road immediately north of the Highline Canal.

Neighbors: Approximately 7,610 acres within the planning area are privately owned by a variety of landowners. These parcels vary from unfenced and unoccupied desert to lots with buildings and habitations on them. The general public commonly uses roads and trails accessing these private tracts, and the lands themselves, because most private land in the area is not signed as private. This office has recently received a right-of-way (ROW) request for an 8-inch potable water pipeline into the south end of the privately owned lands. One can assume that this pipeline is a precursor to development of those lands.

The Colorado Division of Parks and Outdoor Recreation manages Highline Lake State Park, which is immediately to the southwest of the project area and provides opportunities for boating, fishing, swimming, camping, picnicking, and hiking or mountain biking on marked trails. Because the State Park's intensive camping use is largely during the summer, while camping popularity in the North Fruita Desert peaks in spring and fall, Highline serves as a natural adjunct for camping in the area. Highline Lake State Park provides a 3.5-mile loop around the lake for non-motorized use, and linkage with trails on BLM-managed land is a priority with the park manager. With its on-site, emergency-trained law enforcement rangers, the park serves a search and rescue and emergency medical function for visitors on surrounding public lands.

The Bureau of Reclamation (BOR) has on-the-ground jurisdiction over public lands withdrawn for authorized water control purposes,

which include flood control dams, water diversions and the 2.5-mile stretch of Government Highline Irrigation Canal to its intersection with the Grand Valley Irrigation Company Canal. Administration of BOR's operations is shared with the Grand Valley Water Users Association. A 1983 Memorandum of Understanding (MOU) (draft revision 1989) allows for BLM grazing management on BOR withdrawn lands. The potential exists for other BLM-managed specific purposes such as recreation to be allowed within the withdrawn areas, but that would require a supplemental agreement to the MOU. Generally, on BOR-administered withdrawals, lands are closed to recreational OHVs unless opened through a public process. BLM has the right, through the MOU, to allow for other uses on the ROW lands as long as the primary water purposes are not adversely impacted. However, there have been past problems connected to public recreation use of BOR lands and facilities, including potential liability (the Water Users Association does not feel that the Colorado Recreational Liability Release Statue provides adequate protection from liability), vehicle access across dam structures not designed for that load, increased siltation into the canal from OHV activity, and shooting damage to the dam outlet structures.

Visuals: The North Fruita Desert Area south of the Bookcliffs is in an undesignated Visual Resource Management (VRM) category. That portion of the planning area in the Bookcliffs is designated as Visual Resource Management Class III. The objective of this class is to partially retain the existing character of the landscape. A noticeable degree of change is anticipated from land management activities but is in an area where visual change would be reduced through reasonable constraints in project design and mitigation.

Recreation: Visitation is highest during the spring and fall months and declines during the winter and summer months. OHV riding and mountain biking are predominant uses. The North Fruita Desert Area is commonly used by residents of Mesa County because of its close proximity to Fruita and Grand Junction as well as its easy, low elevation, year-round access. In the last five years, due largely to publicity generated by the Fruita business community, the area has become enormously popular for mountain bike riding. A trail system on either side of 18 Road next to the Bookcliffs has been developed that is attracting riders from all over the country. These trails were user-built without BLM environmental review or authorization. In 1994, there were fewer than 500 bikers who used the trails at the end of 18 Road. Eight years later, it is estimated that some 20,000 riders a year use the

trails in this area. A large number of those users who come from outside of the Grand Valley also camp overnight in the vicinity of the trails. It is not unusual to encounter 20 to 30 separate camps, mostly located at the end of 18 Road, on a busy spring weekend. Overall annual use in the area is estimated to be about 50,000 visits.

The level of discovery and subsequent use are creating resource deterioration, user conflicts, and visitor safety problems. Adverse resource impacts include unauthorized spur routes, scattered camping areas, parking in new and inappropriate locations, driving cross-country, littering, and recreation use resulting in conflicts with other land uses (livestock, privately landowners, and other recreational pursuits). BLM and its partners have constructed a bicycle trailhead facility complete with a shade structure, vault toilet, and informational kiosk toward the northern end of 18 Road, initiating management of the 18 Road camping area as well. However, the need for intensive management to preserve resource qualities and recreation opportunities continues to be evident.

Minerals:

Oil and Gas: Approximately 25 percent of the area within the planning boundary is currently leased. Most of the active wells within the North Fruita Desert Planning Area are along its perimeter. There are several wells within the area that have been inactive for several years. In the near future, the operators of these wells would be contacted and decisions made to either plug them or leave them in their present state. If some work is done on these wells, more heavy vehicle activity would result within the planning area for a period of time. This would include large trucks, work-over rigs, service trucks, water trucks, and probably some upgrade to the present access roads to these wells. If the wells are plugged, then reclamation and rehabilitation of the well sites would also include abandoning the roads. The process to plug these wells and/or put them on line would likely take several years.

A cluster of wells on the eastern border of the area, connected by pipelines to natural gas source wells located in the Bookcliffs, serves as natural gas storage reservoirs. During the spring and summer, natural gas is pumped into these underground storage wells. With the onset of colder winter temperatures, gas is pumped out of the storage wells to serve the heating needs of much of the Grand Valley.

Coal:

In 1981, BLM issued three coal leases totaling 15,000 acres in the area of the Bookcliffs north of 18 Road. The coal lessee (Dorchester Coal) followed this up with a development plan that would have linked a mine portal on private land with a haul route utilizing 18 Road and would have included placement of surface facilities on public lands below the portal site near the end of 18 Road. A lack of demand for the coal short-circuited implementation of the development plan, and the mine portal was closed and reclaimed, leaving 800-foot long underground mine entries still intact. Recently, leasing interest has been shown in portions of the old Dorchester leases. If new leases were issued, and the mine portal reopened and development of the leases resumed, heavy hauling activity on 18 Road as well as ancillary facility development would preclude use of the proposed campground and many of the bicycle trails in this area. In the Grand Junction RMP, mineable coal in the Bookcliffs area is "acceptable for further leasing under the federal coal leasing program." Additional acreage along the face of the Bookcliffs was made available in the Grand Junction RMP to accommodate any surface facilities that might be developed in conjunction with any leases.

Sand and Gravel:

Historically, small quantities of sand and gravel have been sold in the North Fruita area. As such sales are discretionary, BLM can ensure that such sales do not adversely impact natural resources in the area.

Wildlife:

Wildlife is not abundant in the North Fruita Desert. While the numbers of animals are low, the number of species that have been recorded here is surprisingly high (see Appendix B). This Appendix also gives users of this plan information for estimating impacts from this plan and other human actions and for finding opportunities to help or enjoy wildlife (see Vision Statement below). The area contains wildlife species of special concern. The endangered kit fox and threatened burrowing owl, under state law, and the threatened bald eagle, under federal law, occur here. The populations of the fox and owl are low and in decline. In addition seven BLM sensitive species have been documented to exist in the North Fruita Desert Planning Area. One of these, the ferruginous hawk, has incurred a much-reduced population in the last decade in the Grand Valley. The Grand Valley pronghorn antelope population is well below the potential that the size of the range and forage would indicate. Mule deer use a majority of the planning area,

including the higher areas of the North Fruita Desert adjacent to the Bookcliffs for winter range. Approximately seven sections in the northwest of the planning area, adjacent to the Bookcliffs, are within critical deer winter range. Additional habitats especially important to wildlife are the East Salt Creek riparian area, the large sagebrush stands close to Colorado Highway 139, prairie dog colonies, and the juniper savannah below the Book Cliff line. The Bookcliffs support cliff-nesting raptors, notably prairie falcons.

Vegetation:

The area contains several plant species of special concern. The following is a listing of the state and federal plant species of special concern.

Plants:

Grand Valley Buckwheat
Cliff-Dwellers Candlestick (Tall Cryptanth)
Nevada Onion

Riparian:

Drainages with riparian characteristics include East Salt Creek (all), Big Salt Creek (scattered occurrence within the private land areas), Coal Gulch, and the upper portions of Little Salt Wash.

Soils:

Local geology has played a dominant role in the types of soils that have developed in this area and the topography in which they occur. Marine shales and sandstones of the Mancos Shale Formation are the primary parent materials; sediments and colluvium, from the Mesa Verde Formation that forms the upper escarpments of the Bookcliffs, have also influenced soil development and characteristics. Soils developing in Mancos Shale materials are generally high in salts and sodium and have textures high in silt and clay. Often a thin, fine sandy loam surface horizon is present. The soils have slow permeability rates and concentrated runoff from storm events or snowmelt usually causes the most erosion and sediment production, primarily from the existing gully systems. Where the more sandy and stony alluvium or colluvium from the Mesa Verde Formation is present as pediment or ridge surficial material, soils do not have the high salt/alkali levels associated with the Mancos Formation, where soil textures are sandier, and permeability is much greater. These soils are subject to more rapid erosion from recreational causes. Vegetation cover, however, is generally greater than that on the Mancos-derived soils, and erosion from natural sources is generally

lower.

Watershed studies document a three to eight-fold greater rate of erosion and sediment production from the moderately to steeply sloping, shallow Mancos shale-derived soils than from those less sloping soils, soils derived from sandier materials, or those with better vegetative cover. The Badlands, Persayo, and Chipeta soil map units yield the highest rates of soil loss (7.5 to 15.0 tons of sediment per acre) while the Avalon, Youngston, and Uffen soils on average undergo 1.8 to 3.0 tons of sediment loss per acre. A great number of check dams, gully plugs, range pitting, and other sediment control/runoff retention measures have been applied to the North Fruita Desert Area and the area adjacent to the east. This has been in response to RMP goals and basin-wide legislation addressing the need to reduce salinity in the Colorado River. Reduction of sediment (and the salts it contains) is an ongoing concern, and BLM management of the Mancos shale areas will continue to receive scrutiny, particularly in view of the effects of salinity on water quality regarding threatened or endangered fish species, agricultural use, and drinking water.

The entire area has been mapped for soils (Mesa County Soil Survey and the Douglass Plateau Soil Survey) at the Order III level, which affords enough detail to assist in the planning of recreational opportunities and use of the area. Physical and chemical properties of the mapped soils are also available.

Water:

The North Fruita Desert Management planning area encompasses portions of the Salt Creek, Big Salt Wash and Little Salt Wash watersheds. Tributaries to Salt Creek include Mack Wash and Coyote Wash. Big Salt Wash tributaries include Coal Canyon, Dry Gulch, Lippan Wash, Layton Wash, and East Branch. Tributaries to Little Salt Wash are unnamed. The reaches of these tributaries within the planning area are ephemeral, so flow is in response to convective summer storms and snowmelt. Limited water quality data is available for these systems because they are generally dry.

Data collected by BLM in Big Salt Wash on the north end of the planning area indicate elevated total dissolved solids (TDS), with the major ions including sodium, magnesium, and sulfates. The mean TDS was nearly 1100 milligrams per liter (mg/l). As the streams flow to the south across the Mancos shale the TDS levels increase, as evidenced by the mean TDS on East Salt Creek above the canal at nearly 3400 mg/l. No suspended sediment data has been collected but visual observation indicates extremely high

levels are common during runoff events. Levels over 300,000 mg/l have been measured on West Salt Creek, and similar concentrations probably occur in the washes/creeks within this area. Channel cross-sections on Big Salt indicate significant channel erosion occurs during some runoff events.

The Colorado River Basin Salinity Control Act (Public Law 93-320) was enacted in June 1974. Title I of the act addresses the United States commitment to the Water Treaty of 1944 with Mexico. The Colorado River Basin Salinity Control Act was amended in 1984 by Public Law 98-569. Public Law 98-569 included direction to the BLM to develop a comprehensive program for minimizing salt contributions from lands under its management. Studies conducted on Mancos shale in the Upper Colorado River Basin have demonstrated a positive relationship between sediment yield and salt production (Schumm, et.al., 1986). Sediment yield increases as a result of either upland erosion or streambank and gully erosion. Upland erosion is attributed to rill and inter-rill flow. Salt and sediment yield are dependent upon storm period, landform type, and the soluble mineral content of the geologic formation. Badlands are the most erosionally unstable, with sediment yields as high as 15 tons per acre (U.S. Department of Agriculture, 1976). Rilling accounts for approximately 80 percent of the sediment yield (U.S. Department of Interior). Because salt production is closely related to sediment yield and the badland soils have not been leached of their soluble minerals, they produced the greatest amount of salt of the various landform types. The Soil Conservation Service in 1977 estimated that the Grand Valley annually contributed 2.9 million tons of sediment, and 600,000 to 700,000 tons results from erosion.

Archaeology:

The North Fruita Desert is characterized by a very low density of cultural resources. This doubtless reflects the harshness of the arid local environment and the consequent of natural resources available to prehistoric hunter-gatherers. These conditions probably prevailed throughout the Holocene era. Though a considerable portion of the area has been inventoried for cultural resources, only six of the recorded sites have been considered eligible for nomination to the National Register of Historic Places. Further, a formal re-evaluation of these sites resulted in a change in status to non-eligible. Nonetheless, any ground-altering projects would be subject to a Class III inventory and appropriate mitigation efforts as mandated by Section 106 of the National Historic Preservation Act.

Paleontology:

Due to eons of erosion that has effectively covered any lower strata, there are few paleontological remains on the valley floor. Recreational collecting for petrified wood, vegetative, and non-vertebrate fossils does occur along the cliff faces and on top of the Bookcliffs.

II. ISSUES AND CONCERNS

Early in the planning process, the NFD Citizen Ad-Hoc Committee generated a list of primary issues and concerns. In the order of importance they are as follows:

1. How to increase law enforcement to reduce trash dumping, under-aged parties, and vandalism.
2. Conflicts among mountain bikers, motorized users, and other users (horseback riders, ranchers, shooters, hunters etc.).
3. Over-restriction of users.
4. Proliferation of unauthorized roads and trails from both motorized and mechanized visitors.
5. How best to pay for management actions (user fees for management of the area).
6. Resource damage due to large numbers of overnight campers.
7. Uncontrolled shooting.
8. General environmental damage from all uses.
9. Conflicts between mountain bikers and motorized users.
10. How not to restrict certain users because of other users mistakes.
11. Large increase in traffic on 18 Road and associated impacts (dust, road conditions, safety concerns etc).
12. Rangeland management.
13. Declining wildlife populations.

14. Lack of respect for private land.
15. Domestic or feral dogs in the area during livestock calving - impacts on wildlife.
16. Erosion control on trails.
17. How to increase fines for violating regulations.

Out of these issues, a vision statement and goals and objectives were developed.

III. VISION STATEMENT

The following vision statement was developed and adopted by the Citizen Ad-Hoc Committee.

The North Fruita Desert will provide opportunities for a wide variety of motorized and non-motorized recreational activities and benefits while maintaining compatibility, through education, among differing user groups. Recognizing that the area is strongly tied both economically and socially to the greater Fruita area and the lower valley, the area will continue to contribute to the economic viability and stability of traditional uses as well as to the quality of life for valley residents. Opportunities for human activities will be provided while protecting or enhancing the area's environment and natural resources such as soils, native vegetation, and wildlife populations. The common safety of all users will be emphasized and cooperative educational programs will be utilized to instill proper land use values and ethics.

IV. MANAGEMENT GOALS and OBJECTIVES

The following management goals and objectives were adopted by the Citizens Ad-Hoc Committee. The goals and objectives of the planned management actions are to:

- 1) GOAL:** Protect and maintain sustainable ecosystem functions and cultural integrity while providing traditional and modern uses in the area.
 - a) Objective: To maintain soil quality and vegetative stability through management of motorized and non-motorized trails and livestock.

- b) Objective: To coordinate all special motorized and non-motorized events where all parties are responsible for the integrity of the land.
- c) Objective: For all people to respect the area and range improvements through education.
- d) Objective: Protect water quality and yield.

2) GOAL: Achieve a compromise, between all user groups, that takes into account that human activity and humans are natural and that human impact on our environment is inevitable, recognizing that there are a diverse number of ways the land should be used and benefited from.

- a) Objective: To give all user groups equal recognition with regard to multiple-use resource management objectives and actions.
- b) Objective: Establish a more reasonable application protocol for competitive recreational events that all users follow.

3) GOAL: Encourage responsible recreation in such a manner that leads to maintained or improved land health.

- a) Objective: Coordinate the use of all recreation interests to see improved land health through a proactive and enforceable management plan.
- b) Objective: Provide for educational and informational opportunities for user groups.

4) GOAL: Maintain biodiversity.

- a) Objective: Protect and maintain valuable community parameters, natural resources and wildlife habitat.
- b) Objective: Restore sensitive areas heavily damaged by human activity.
- c) Objective: Reduction of impacts by motorized and mechanized vehicles and horses in areas

critical to wildlife and native plants.

d) Objective: Reintroduction of wildlife and native plants to key areas.

5) GOAL: Decrease conflict between users.

a) Objective: To foster responsible use through shared education and word of mouth about how important the area is to ALL of us.

6) GOAL: Continue to include opportunities for shooting as a way to reduce conflicts concerning safety of other users and livestock.

a) Objective: Reduce hazards to public health and safety by identifying safe locations for recreational target shooting.

FUNDING: Obtain needed funding for prescribed management actions.

a) Objective: Explore all possible funding options and select the best method(s) of funding each action. Accomplish this within 60 days after final management decision.

b) Objective: Form a group that would be responsible for working with BLM staff on specific options chosen.

c) Objective: From the chosen funding options, pursue and obtain funding for each management action within 2 years of decision.

V. MANAGEMENT ACTIONS AND DIRECTION

Overview

The following management actions would be implemented to address the issues and concerns pertaining to certain program areas. The specific management direction and actions are those that best accomplish the planned management objectives and are the most compatible with the resources present in the North Fruita Desert. Management direction was derived from numerous meetings with the North Fruita Desert Ad-Hoc Committee and a core team of specialists from the BLM.

Recreation

- A. Communication among the various user groups and private landowners would be encouraged. Periodic roundtable discussions among the user groups to settle problems would be held on an as-needed basis.
- B. Camping would be managed through construction of a defined primitive campground located at the end of 18 Road. This campground would be designed to handle 35-40 sites. Sites would be clustered around open vault toilets. The sites would be hardened for use and the main campground loop road and access spurs would be delineated with barriers.
 - The 35-40 sites would be designed to branch off the main campground loop road on 30-35 foot spur roads. Each site would be approximately 30' x 30'. A picnic table would be placed in each site.
 - During construction of the camping sites and the access spurs, an estimated 20-25 small pinyon pine trees would be removed to allow for adequate site sizing.
 - The main campground loop road would be hard surfaced with a base covered with a gravel top. Suitable barriers would delineate the roadway to prevent vehicles from wandering off road.
 - Access spurs to the campsites would be gravel surfaced and delineated. The end of the access spur would allow for parking two vehicles per site.
 - Camping sites would be located no more than 250 yards from a vault toilet. Sites would be clustered so that one toilet services 6-10 sites. Toilets would be Class C type with an underground vault, a toilet throne, and a wooden screen around the toilet.
 - Three present sites located towards the bottom of the drainage on the west side of the main road would be closed. These sites are difficult to access and their long-term use would tend to increase siltation into the drainage.
 - A kiosk with camping, regulatory, and Leave No Trace information would be installed near the entrance.

- Camping outside the campground area would be prohibited except for overflow during permitted events. Overflow sites would be planned for and then rehabilitated after use as part of the stipulations for permitted events.
- Monitoring during permitted events and busy seasons would be used to define further campsite designation and management needs.
- Open, solid-fuel campfires would be prohibited in the campground area year-round. Gasoline and gas cooking stoves would be acceptable.
- Overnight camping fees may be charged and all collected fees would be returned to the campground to be used for maintenance and services. Partnership agreements to help BLM in the management and collection of fees would be sought.

C. Other management actions pertaining to this issue are as follows:

- Encourage visitors to use private camp areas and Highline State Park.
- Implement a low impact camping program, i.e., a Pack-it-in-Pack-it-out approach would be used to manage the refuse issue.
- Revegetate areas previously damaged by overnight camping.

D. Target shooting would be managed in the following ways:

- Educate shooters about the other activities happening in the desert and their need to follow safe shooting practices. Hunting information would be posted on bulletin boards.
- Post areas where other uses are concentrated to advise shooters to be extra careful around them.
- The upper end of 18 Road (bicycle emphasis area) would be closed to target shooting, except for the lawful taking of game during hunting season, due to high recreational visitor density and the presence of the campground (see map).

- BLM would consider the designation of shooting sites if one or more responsible shooters groups demonstrates a desire to share with BLM in the long-term management and clean-up of shooting areas. Coordination is ongoing with a group of shooters who have organized to help.
- E. Manage 18 Road in the following manner:
- Work with Mesa County to increase the frequency of maintenance, post speed limit signs, and periodically gravel the road and/or spray a dust control agent on roads.
 - Encourage private entities to establish a shuttle service from Fruita during the Fat Tire Festival and on busy weekends. Consider the establishment of a shuttle service as a stipulation for the special recreation permit for the Fruita Fat Tire Festival.
- F. Develop the parking area just off of 18 Road currently used by mountain bikers (gravel parking area, kiosk and visitor information board, toilets, and shade cabana). This project was completed in 2002 with the installation of a concrete vault toilet.
- G. Competitive and organized events would be considered through the BLM's Special Recreation Permit process. Events that would adversely affect the existing trails or existing uses would not be permitted. In order to protect trails, stipulations governing competitive and event permits would include language allowing for the cancellation or alteration of routes in case of inclement weather. Monitoring both before and after events would be used to assess impacts attributable to the activity. Post-event rehabilitation and future permit stipulations would be based on monitored impacts. BLM retains the discretion to limit the number of participants in any given activity.

Except for observed trials motorcycle events, routes for these purposes would be limited to designated trails and washes.

Observed Trials is a competition among motorcyclists that scores them on the ability to traverse large rocks or other obstacles. Trials events would be carefully permitted to allow for the event to use suitably challenging terrain for sections and designated routes as transits between sections.

- H. Two emphasis areas would be designated: 1) A bicycle emphasis area would be located at the northern end of 18 Road, and 2) A hiker/equestrian emphasis area would be located to the west of the Hunter Canyon Road at the base of the Bookcliffs. Trails in these areas would be designated as non-motorized, except for administrative and emergency use.
- I. A lockable gate would be erected at the entrance to the county gravel site off Highway 139 to protect the ongoing rehabilitation of the site.

Trails and Travel Routes

- A. Two different general travel management prescriptions are being considered for the planning area. The “Encourage, Prohibit, Allow” (EPA) prescription and the designated routes prescription are described below.
 - 1. The North Fruita Desert area would be managed using an EPA approach. “Encouraged” routes are existing trails that form loops and connections and offer attractive recreational trail opportunities. These would be marked on the ground and on hand-out maps to allow for easy visitor orientation. “Allowed” routes are secondary trails that would be marked on hand-out maps with less line weight and not marked on the ground. These routes are identified solely to facilitate navigation. It is anticipated that many of these routes would see less use and some would eventually disappear through time. “Prohibited” routes would be closed. Typically these routes enter private lands and public access would be discouraged through signing. “Encouraged” and “Allowed” routes outside the bicycle emphasis area would be open to all types of vehicles, although single-track trails would be limited to vehicles less than 32 inches wide. At the end of five years, the North Fruita Desert area would be re-evaluated to ascertain if there has been significant progress in decreasing visitation on “Allowed” routes.
 - 2. The designated routes model would be used to manage all motorized and mechanized travel. If increases in use are indicated through monitoring, designated routes may also be applied to equestrian and foot traffic as well. In this prescription all routes would be designated as available to, or restricted to, each means of travel. Colorado standard travel management signs would be used. Administrative

access would be provided to commercial sites (gas wells, range improvements). Desirable loop trails would be prominently signed. Trails in the bicycle emphasis area would be restricted to non-motorized use only, except for administrative and emergency needs. Outside the bicycle emphasis area all trails would be open to all uses with the exception of single-track trails. Single tracks would be open to hikers, bicyclists, equestrians and motorcyclists only. All closed routes would be signed closed and systematically rehabilitated as resources allow.

- B. The following actions are common to both travel management prescriptions described above:
1. Roads and trails entering private land would be signed “End of Public Route, Entering Private Land.” Trail-end signs would be located on public land, far enough from public/private land boundaries to allow vehicles to turn around on public land.
 2. New shared-use, single-track trails would be constructed in the following locations:
 - 1 ½-miles of trail connecting Coal Gulch Road with 16 Road, to the north of private property.
 - 2 miles of trail following a wash that intersects V.70 Road and is parallel to the western edge of Coal Gulch Road.
 - 4 miles of trail on the ridgeline immediately to the south of Coal Gulch Road.
 - 3 ½-miles of trail following Coyote Wash and trail segments further to the east with the intent of connecting Highline Park to the North Fruita Desert trails and to relocate most OHV traffic away from the Bureau of Reclamation water control structures and the Highline canal.
 - 2 miles of trail parallel to 18 Road, located 1/8-mile east of the private inholdings, diverting traffic away from private lands and Big Salt Wash.
 3. New bicycle, single-track trails would be constructed in the following locations:
 - 1 mile of trail connecting between the eastern extension of Vegetarian Trail and the Edge Loop Trail at the base of the Bookcliffs.

- 1 mile of trail to the east of Prime Cut Trail that would accommodate beginner-to-intermediate bicycle riders on a north/south route.
4. The OHV open area just north of the canal on 18 Road would be developed to a) control the spread of the area, b) allow for trailhead facilities for the motorized visitors, and c) allow for proper use and Leave No Trace information to best inform users of expected behavior. Actions include the following:
 - Fencing the outer boundary of the open area.
 - Fencing approximately 2 ½-miles north along the east side of 18 Road.
 - Fencing approximately 1 mile along the north side of Q.50 Road.
 - Installation of a vault toilet.
 - Installation of a trailhead facility near the intersection of 18 Road and Q.50 Road with a kiosk to orient visitors, instill proper use ethics, and inform visitors.
 - All fencing would be designed to allow for the passage of antelope. Fencing would be three wire with a smooth bottom wire. Wire spacing would be 18", 30", and 42" as measured from the ground.
 5. Sections of the southern half of Zippity Doo Dah bicycle trail, which represents a soil erosion and safety hazard, would be rerouted and/or re-constructed. Until this work is completed, the trail would remain open to bicycle use.
 6. The existing rope-assisted bicycle route down the pour-over in Lippan Wash is considered a liability and safety hazard. The rope would be removed and an existing stock trail bypassing the hazardous point would be upgraded and extended to allow for safe passage.
 7. Additional trails throughout the planning area would be considered by the BLM subject to the Agency's environmental analysis process. All users; whether motorized, mechanized, horseback or afoot; would be encouraged to present trail proposals to BLM for evaluation as future designated routes. After the National Environmental Policy Act (NEPA) process is complete, user groups would be given the opportunity to construct and maintain new authorized trails.

8. All new, unauthorized routes would be closed with signs and physical blocking and then rehabilitated.
 9. Existing routes that are part of a recognized trail system but do not meet BLM standards would remain open until suitable relocated/alternative routes are available. Routes would be evaluated and restoration work done on a five-year rotating basis.
 10. All drainage washes, except for East Salt Creek and the portion of Big Salt Wash north of the last privately owned land on 16 Road, would be open to all travel modes and all users. Motorized and mechanized users would be restricted from in-stream use of East Salt Creek and the above-named portion of Big Salt Wash because of these streams' riparian characteristics. Crossing use would not be curtailed.
 11. An area immediately north of the Coal Gulch Road offers the potential for future recreational trail opportunities. Any further planning in this area would require a separate evaluation, environmental assessment process, and public involvement.
 12. BLM would discuss with BOR, on an annual basis, issues surrounding recreation impacts on the High Line Canal. At that time actions would be considered to protect the canal and its infrastructure. Routing of recreational trails would be the major tool used to discourage vandalism. Other physical protection measures would be considered as problems are identified.
 13. Reroute travel routes that traverse prairie dog colonies, where feasible.
- C. During the course of discussions about the trails, no resolution was reached about Lippan Wash. One of the following three scenarios would be used to manage trails in Lippan Wash.
1. Bicycle and motorcycle use on existing trails within the bicycle emphasis area would be separated to the greatest extent possible. Motorcycle traffic heading east on Coal Gulch Road would be routed to the bottom of the Hunter Canyon drainage on existing oil and gas service roads and south on 21 Road or west on R. 20 Road, which connects to

single track in returning to 18 Road. This would allow for linkage to existing motorcycle trails without impacting the core of the bicycle emphasis area.

2. Bicycle and motorcycle use on existing trails within the bicycle emphasis area would be separated as much as possible with one exception. Motorcycle traffic heading east on Coal Gulch Road would follow existing oil and gas service roads (T8S R100W sec. 30,31 and T9S R100W sec. 6 and T9S R101W sec.1) to the bicycle route into Lippan Wash. The bicycle trail would be re-worked so that the motorcycles would use the bottom of the wash to the degree possible and a new trail winding in and out of the wash would be constructed for the bicyclists. At the western edge of the bicycle emphasis area, the trails would split with the bicyclists routed up Edge Loop. One and one-half miles of new single track would be constructed for the motorcyclists to route them to the east-west trail in T9S R101W sec. 3,4,5,6,7,8,9.
3. The third alternative would be similar to the Lippan Wash alternative with the exception that bicycles and motorcycles would not share the trail in T8S R100W sec. 36. A 1 ½-mile of single-track trail would be constructed parallel to the existing bicycle trail into Lippan Wash. The rest of the route would be the same as detailed above.

Signing

- A. Kiosks would be posted at ten key entry points leading into the area informing users of locations of recognized recreation roads and trails. Recreation routes would be continuously signed on the ground.

Information and Education

- A. Develop a brochure of the area detailing the “Encourage, Prohibit and Allow” management approach. “Encouraged” routes would appear on maps as weighted-line loops. “Allowed” routes would be mapped but with lesser line weight indicating lesser emphasis. If the designated route prescription is selected, that system would be explained. If the designated route management is adopted, signing and restrictions would be explained to the public. Emphasis areas would be included so that visitors can identify areas suitable for their use. The map would also include closed routes and areas

closed and/or restricted to overnight camping or shooting, as well as ethics messages. Ethics messages would be provided to local shops selling outdoor products, mountain bikes, motorcycles, and firearms.

- B. Identify seasons when human uses are sensitive to area values such as wildlife, hunting recreation, and road conditions. Educate users about these seasons.
- C. Educate all users on the environmental impacts and potential user conflicts through signs, maps, information brochures, and kiosks. Encourage the various user groups to educate their users.

Law Enforcement

- A. Cooperative law enforcement activities would be strengthened in the area. Communication between BLM law enforcement and the Mesa County Sheriff would be increased. The BLM would work with the Sheriff's Office to patrol the area twice a week during high use periods.
- B. Ongoing cleanups would be organized to discourage more dumping and to foster user group and individual involvement in the health and appearance of their public lands.
- C. All user groups would be encouraged to enforce themselves through peer group pressure, to carry cell phones to report criminal activity, and to take down license numbers of violators.
- D. Public service announcements would be used to emphasize the importance of keeping the desert clean.
- E. Local high schools would be visited on a periodic basis to explain repercussions of illegal activities. Under the auspices of the Fruita Kiwanis Club, a cooperative effort has been set up to foster high school students' involvement in clean-up and special projects.
- F. The media would be encouraged to report incidents, showcase successful partnership efforts, and support BLM efforts in the area.
- G. Outreach education would be conducted on a periodic basis for schools, clubs, and organizations.
- H. The Mesa County Sheriff's Office and the Lower Valley Fire Department would be consulted in establishing helicopter landing

zones within the area for search and rescue and emergency extraction needs.

Grazing

- A. Where gates are currently located, cattle guards would be installed for better livestock management.
- B. On all printed materials such as maps, brochures, and bulletin boards, information would be provided to inform users about grazing use in the area, in particular the time of year that calving takes place. By voluntarily separating recreation and grazing operations it is anticipated that conflict between the two groups would decrease.
- C. Support ranchers' efforts to protect private land.

Wildlife

In order to address the issue of declining wildlife populations, the following management actions would be implemented:

- A. Winter mule deer critical range would be identified on maps and this information made available to user groups during harsh winters.
- B. Restrict recreational visitors to "seasonal only" use in areas where habitat for sensitive species is threatened. Locations would vary as animals select differing production sites.
- C. Discourage human encroachment and activity in close proximity to burrowing owl and ferruginous hawk nests. Close travel routes where necessary to accomplish this objective.
- D. Reroute travel routes that traverse prairie dog colonies, where feasible.
- E. Vehicular recreation downstream from Mitchell Road in the East Salt Creek riparian area would be prohibited.
- F. Maintain the vehicular exclosures, including the 72-acre Harvester Exclosure, to allow studies of the native biological processes and productivity.

- G. Cooperate with the Colorado Division of Wildlife, Colorado Natural Heritage Program, and U.S. Fish & Wildlife Service in projects to restore and improve biological resources in the area.

Vegetation and Soils

- A. Areas where resource damage occurs would be closed for recovery purposes.
- B. Define appropriate resource indicators and standards related to levels of acceptable impact and manage to attain goals of the acceptable impact.
- C. Cooperate with user groups and agencies; encourage them to implement improvements to minimize erosion such as rerouting use-damaged trails, constructing water bars etc.
- D. Re-seeding with native species may be used if beneficial in reducing the monoculture of cheatgrass that dominates the area vegetatively.

Realty

- A. Trails entering public land would be signed "End of Public Route, Entering Private Land." Turnarounds would be located on public land.
- B. Where feasible, work to purchase or negotiate ROWs and or public use easements across private lands to improve access onto public lands.

Minerals

- A. Oil and Gas-Leasing would continue to occur as per the RMP with the exception of necessary protection of proposed or existing recreation facilities as discussed below. Recreation sites, where there is BLM facility investment, would be protected from surface on-site oil and gas development. Both the 18 Road Trailhead and Campground (T8S R101W sec.30) are within a parcel where a lease sale was held but no bid was received (lease no. 65957). The BLM Colorado State Office would be advised to add a No Surface Occupancy (NSO) clause to 80 acres surrounding the trailhead and 200 acres surrounding the campground if the area is nominated for lease again. The open OHV area at the southern edge of the planning unit (T9S R101W sec. 9) is not leased but is

included as part of the Fruita Gas Storage Agreement (COC 047628). Although the probability of a drilling project at that location is unlikely, the amount of development, if it should occur, can be designed to be compatible with use of the area for OHVs. If found to be necessary, BLM may approach the agreement proprietor, Public Service Corporation, to try and reach an agreement to minimize any proposed development impacts to the OHV area.

- B. Coal - If coal leases are again issued in this area and mine development occurs, it is anticipated that mining facility construction and use of 18 Road as a haul road would halt camping and mountain biking in the 18 Road area. If this scenario ensues, the campground and/or trailhead would be removed. The proposed campground and existing trailhead area would be protected from future coal operations by an NSO lease stipulation, involving 200 acres for the campground and 80 acres for the trailhead. However, if coal surface facilities were to impact the campground and trailhead, a special stipulation on the coal lease, ROW, or other authorization would require the coal company to fund the relocation of the campground and trailhead. If the coal mine surface facilities are proposed within the campground and/or trailhead area designated as NSO, the NSO requirement may be waived or reduced in scope if the coal company pays for the relocation of the campground and trailhead, as noted above, or if the lessee can demonstrate that operations can be conducted without causing unacceptable impacts.
- C. Requests for saleable products such as rock, sand, and gravel would not be authorized at, or adjacent to, BLM recreational facilities on the north and south ends of 18 Road.

VI. ADMINISTRATION AND MONITORING

Interested organizations and user groups would be encouraged to establish cooperative programs for the patrol and maintenance of the area and to help prevent irresponsible use, trash, and vandalism problems through a heightened presence and public education.

A monitoring system would be established to analyze recreational impacts. The monitoring data would furnish baseline information for future land-use decisions. Periodic monitoring would be conducted by field office personnel and volunteers. Monitoring would include visitor contacts, resource inspections, and routine patrols. Photo monitoring of selected locations would aid in the evaluation of impacts. User groups would also

be notified and asked to provide input about potential solutions. Photographic trend plots, designed to document changes in plant cover and erosion, would be employed to evaluate the effectiveness of the management methods prescribed in the plan

Recreation management decisions concerning designation modifications and recreational facility/trail proposals would be evaluated annually. Representatives from interested user groups would be asked to participate and comment during the review process. Decision-making criteria; including visitor numbers, user complaints, user conflicts, quantity and variety of recreation uses occurring, types and numbers of recreation violations, proliferation of unauthorized routes, changes in visitor needs, and documented resource damage; would provide the basis for recreation management determinations. Final determinations would be approved by the Field Manager.

VII. FUNDING

Through its access to construction and maintenance funding, the BLM intends to invest \$140,000 into implementing this plan in 2005.

The following funding sources outside of the BLM's regular allocation process would be sought to help pay for implementation and maintenance of this plan and to extend federal funding.

- A. BLM would consider the collection of a nominal camping fee for overnight use of the campground sites at the end of 18 Road. Fees would go directly to upkeep and maintenance costs of the campground. The BLM would seek partners in managing the campground.
- B. State grants and Great Outdoor Colorado (GOCO) funds would be applied for by the user groups, as well as the BLM.
- C. Fees would be collected from special events that take place in the area, i.e. Fruita Fat Tire Festival, Bookcliff Rattlers race etc.
- D. Corporate donations would be sought, i.e. mountain bike and motorcycle manufacturers.
- E. Donations of volunteer time and funding would be accepted from the various user and environmental groups.

VIII. APPENDICES

APPENDIX A

LIST OF ACRONYMS AND ABBREVIATIONS

IRMA: Intensive Recreation Management Area
RMP: Resource Management Plan
RAC: Resource Advisory Council
GJFO: Grand Junction Field Office
ACEC: Area of Critical Environmental Concern
OHVs: Off-Highway Vehicles

APPENDIX B

WILDLIFE of the NORTH FRUITA DESERT

This is a selective, annotated list of the wildlife of the desert area north of Fruita, Colorado and north of Highline Canal. Species other than the listed also occur but are considered too peripheral to be significant.

Mammals

Desert Shrew: *hypothetical, but should be present*

Several bat species visit the area. The following two species are characteristic of low elevations.

Yuma Myotis: *BLM sensitive species, uses desert ponds and Big and East Salt Washes.*

Palid Bat: *uses desert ponds for drinking water, bathing, and some foraging.*

Desert Cottontail: *jackrabbits are present but scarce and more common to the west.*

White-Tailed Antelope Ground Squirrel: *especially around rock outcrops and 2-foot tall shrubs.*

Rock Squirrel: *especially along Highline Canal.*

White-Tailed Prairie Dog: *the keystone wildlife species of the area.*

Botta's Pocket Gopher: *may not occur west of 21 Road.*

Plains Pocket Mouse: *most common on high seral ground.*

Ord's Kangaroo Rat: *common especially over sandy soils.*

Western Harvest Mouse: *prefers low seral sites.*

Deer Mouse: *abundant especially on lower seral sites.*

Northern Grasshopper Mouse: *around juniper trees.*

Desert Woodrat: *this smallest packrat takes cover under rocks and large size debris.*

Coyote: *ubiquitous, ADC work on coyotes is largely winter work and aerial gunning.*

Kit Fox: *State endangered species, believed to be scarce due to the abundance of coyotes.*

Red Fox: *especially close to agriculture.*

Raccoon: *regular along Big and East Salt Washes.*

Long-Tailed Weasel: *especially in prairie dog towns.*

American Badger: *prairie dogs are key, low-to-moderate density compared to Moffat County.*

Elk: *near East Salt Wash and the Book Cliffs, where there is critical winter range.*

Mule Deer: *juniper and riparian cover and at the mouths of canyons breaking the Bookcliffs.*

Pronghorn: *sagebrush needed in winter range, population remains well below forage capacity.*

Birds

Water Birds: *almost entirely excluded. This is because the area is not significant for waterbirds, although East Salt Creek, Wade Pond and other stock watering sites attract them. Activities involving water sites should consider shorebirds, cranes, and ducks at each opportunity.*

Turkey Vulture: *common spring through fall, non-breeder.*

Bald Eagle: *threatened on the federal list, common in winter, prairie dogs and rabbits are key.*

Northern Harrier: *common in winter especially close to water, pasture and idle cropland.*

Red-Tailed Hawk: *common along the north and south edges.*

Ferruginous Hawk: *BLM sensitive species, nesting in scattered junipers and rock outcrops.*

Rough-Legged Hawk: *scarce winter species.*

Golden Eagle: *common year-round, nests known on Big Salt Wash and in the Bookcliffs.*

American Kestrel: *forages on the desert, nests in the Bookcliffs and in big cottonwoods.*

Merlin: *winter species more capable forager in the desert than kestrel.*

Peregrine Falcon: *forages in the desert.*

Prairie Falcon: *the primary falcon of the area, nests on the Bookcliffs.*

Chukar: *more common close to Bookcliffs, uses cheatgrass, several guzzlers for them in area.*

Ring-Necked Pheasant: *East Salt Wash has a few of them.*

Sage Grouse: *one bird found in county line sagebrush just west of Highway 139 in late 1980s.*

Sandhill Crane: *de-listed from State threatened status, roosts in ponds, forages in desert, spring.*

Whooping Crane: *the experimental population of the 1980s and 1990s is functionally extinct.*

Solitary Sandpiper: *the migrant shorebird that forages in the ephemeral streams*

when they flow.

Long-Billed Curlew: *has nested near 19 Road, north of Highline Canal and in an exclosure.*

Mourning Dove: *hunters pass shoot for these in the desert washes.*

Western Screech-Owl: *in the large cottonwoods on farmsteads, ranges into the desert.*

Great Horned Owl: *the most ubiquitous owl, nests in cottonwoods and in the Bookcliffs.*

Burrowing Owl: *State threatened species, requires prairie dogs, great decline in last 5 years.*

Long-Eared Owl: *nests and winter roosts in dense old salt cedars and junipers.*

Common Nighthawk: *summer species, nests most commonly under junipers.*

Common Poorwill: *most common when high country individuals move down before migrating.*

White-Throated Swift: *summer, nests in Book Cliffs, forages widely.*

Black-Chinned Hummingbird: *most common in May and early June, nests in trees and tall shrubs.*

Broad-Tailed Hummingbird: *migrant, most common when Indian paintbrushes are in bloom.*

Northern Flicker: *cottonwood species.*

Gray Flycatcher: *summer resident, juniper species.*

Say's Phoebe: *mostly a summer resident, regularly around abandoned corrals.*

Ash-Throated Flycatcher: *summer resident, juniper species.*

Cassin's Kingbird: *rare summer resident, scattered juniper species.*

Western Kingbird: *regular along powerlines and in farmstead cottonwoods.*

Horned Lark: *usually the most abundant bird of the area, prefers open country/low vegetation.*

Violet-Green Swallow: *summer species, ranges out of nesting habitat to the north to forage.*

Northern Rough-Winged Swallow: *summer, nests in dirt bank holes in the washes.*

Barn Swallow: *summer, ranges out of nesting habitat near agriculture to forage.*

Pinyon Jay: *ranges widely, but nests and spends most time in juniper stands.*

Black-Billed Magpie: *nests in salt cedars and scattered junipers.*

Common Raven: *nests in Bookcliffs, on bridge ledges, on transmission and gas field towers.*

Juniper Titmouse: *juniper species.*

Bushtit: *nests in junipers but ranges widely in winter.*

Rock Wren: *breeding species that rarely spends winter here, most common bird in rocky terrain.*

Bewick's Wren: *one of the loudest and most common juniper birds, several winter in salt cedar.*

Blue-Gray Gnatcatcher: *spring to fall, common in the pinyon-juniper (PJ)/sagebrush edges of the area.*

Mountain Bluebird: *frequent in non-breeding seasons in junipers and*

greasewood/annual flats.

Northern Mockingbird: *summer, nests in tall greasewood stands.*

Sage Thrasher: *more common in spring and fall but nests in sagebrush and sagebrush/greasewood.*

Northern Shrike: *winter, not common but in winter more numerous than loggerhead shrike.*

Loggerhead Shrike: *nests in tall greasewood stands, most migrate south for winter.*

Gray Vireo: *PIF priority concern species, may occur in summer in junipers near Bookcliffs.*

Orange-Crowned Warbler: *one of the more common migrant warblers in the washes in fall.*

Yellow-Rumped Warbler: *the most common migrant warbler.*

Black-Throated Gray Warbler: *a common migrant warbler in spring, nests in PJ woodlands.*

Wilson's Warbler: *one of the more common migrants in the salt cedars.*

Yellow-Breasted Chat: *nests in East Salt Wash into Book Cliffs, needs dense riparian shrub.*

Western Tanager: *common migrant especially in the washes.*

Spotted Towhee: *occurs in the washes, more common north of the Bookcliff line.*

American Tree Sparrow: *winters in the washes in small flocks.*

Chipping Sparrow: *one of the most abundant migrants.*

Brewer's Sparrow: *common migrant, a few may nest in sagebrush-greasewood stands.*

Vesper Sparrow: *common migrant.*

Lark Sparrow: *summer, most common bird at the desert-juniper ecotone.*

Black-Throated Sparrow: *summer, small range in Colorado, spiny hopsage good habitat.*

Sage Sparrow: *absent most of winter, nests in large sagebrush stands west of 16 Road.*

Lark Bunting: *State bird, irruptive, common or rare, nested one summer in last 25 years.*

Song Sparrow: *winters in the washes.*

White-Crowned Sparrow: *common winter species in the washes.*

Dark-Eyed Junco: *most common winter species in the washes and junipers.*

Lapland Longspur: *rare, irruptive, winter, found in horned lark flocks.*

Western Meadowlark: *common except in winter in the washes and adjacent uplands.*

Brown-Headed Cowbird: *summer, parasitizes other bird nests, not known to be serious here.*

Bullock's Oriole: *summer, nests in trees larger than salt cedars.*

Scott's Oriole: *PIF priority species, first known nest in Colorado near north end of 18 Road.*

House Finch: *frequent in non-breeding seasons in junipers and greasewood/annual flats.*

Reptiles

Collared Lizard: *prefers large rocks in its terrain, large down wood make good substitutes.*

Longnose Leopard Lizard: *BLM sensitive species, uncommon, greasewood flats.*

Short-Horned Lizard: *lives where ants are numerous.*

Northern Side-Blotched Lizard: *rocky areas.*

Western Whiptail: *in the tall shrub and juniper uplands.*

Plateau Striped Whiptail: *in the washes.*

Western Yellowbelly Racer: *in tall desert shrub and junipers.*

Night Snake: *rocky habitat.*

Milk Snake: *BLM sensitive species, where there is ample live or dead vegetation ground cover.*

Striped Whipsnake: *near mouths of canyons in Book Cliffs.*

Southwestern Blackheaded Snake: *hypothetical, should be near mouths of canyons in Bookcliffs.*

Gopher Snake (bullsnake): *the most frequently met snake.*

Western Rattlesnake (midget-faded) *BLM sensitive species: uncommon.*

Amphibians

Tiger Salamander: *in wet weather may show up anywhere.*

Woodhouse Toad: *in East and Big Salt Washes.*

Bullfrog: *ponds close to Highline Canal.*

Great Basin Spadefoot Toad: *BLM sensitive species, known in ephemeral water near Bookcliffs.*

Fish

Fish may appear in Duck Inn Pond or in Big or East Salt Creeks, but permanence has yet to be demonstrated. Note that the endangered fish in the Colorado River need to be considered in any action that may affect them, such as water depletion and toxic material runoff.

Invertebrates

Western Harvester Ant: *builds the cone mounds, only golden eagle lives as long as the queen ant.*

Rugose Harvester Ant: *more common close to the Bookcliffs, mounds not symmetrical cones.*

Honey Pot Ant: *large big-eyed nocturnal yellow ant.*

Cedar Gnat (Midge): *gnat season is May 15 to July 15, but don't bet on those dates.*

Differential Grasshopper: *can reach pest numbers, control should not be aerial rangeland spray.*

Checkered White (Butterfly): *flies early in spring, larval food blue mustard, an exotic annual.*

Black Widow Spider: *occupies abandoned burrows of mammals.*

Tadpole Shrimp: *lives in ephemeral ponds.*

IX. MAPS









